



# **See Learning in a Whole New Light**

**The Future of the Aerospace Workforce  
From a NASA Perspective**

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# S&E Workforce Trends

- The U.S. student pipeline is shrinking
- Industry Demand for S&E skills must be recognized
- Minority representation in S&E is only one-third of the representation in the U.S. population at large
- Baby Boom generation peaks soon
- Public perception of aerospace industry as a boring, callous, “rust belt” place to work (Testimony of Elliot Pulham, President & CEO, The Space Foundation, before the Commission on the future of the U.S. Aerospace Industry)





# NASA Workforce Demographics

*NASA's S&E workforce mirrors the Nationwide S&E workforce*

- Average age is 45
- Average retirement age is 61
- 51% have obtained a Master's degree or Ph.D.
- 50% are in positions at GS-14 and higher
- 35% are classified as Aeronautical Engineers
- 25% will be eligible to retire by September 2006



# Philosophical Approach

**“NASA will implement an integrated Agency-wide approach to human capital management. This approach will attract and maintain a workforce that is representative of the Nation’s diversity and includes the competencies that NASA needs to deliver sustained levels of high performance that the Agency’s challenging mission requires.”**

*National Aeronautics and Space Administration, 2003 Strategic Plan*





# Corporate Framework

## Executive Council

### RECRUITMENT STEERING COMMITTEE

#### Associate Administrator for Education

- Links NASA Student Research & Education Programs to recruitment and capacity building, including leveraging University Research Centers (URC), Post-Doc investments, Professional Organizations and Scientific Societies.

#### Assistant Administrator for Human Resources

- Leads the Agency in managing and developing NASA's recruitment and outreach programs. Reviews Enterprise & Center competency analysis data to determine long-range workforce needs. Responds to these needs by developing legislative initiatives and flexibilities that will benefit the Agency. Reviews results of recruitment efforts to continually improve corporate strategies.

#### Assistant Administrator for Equal Opportunity Programs (EOP)

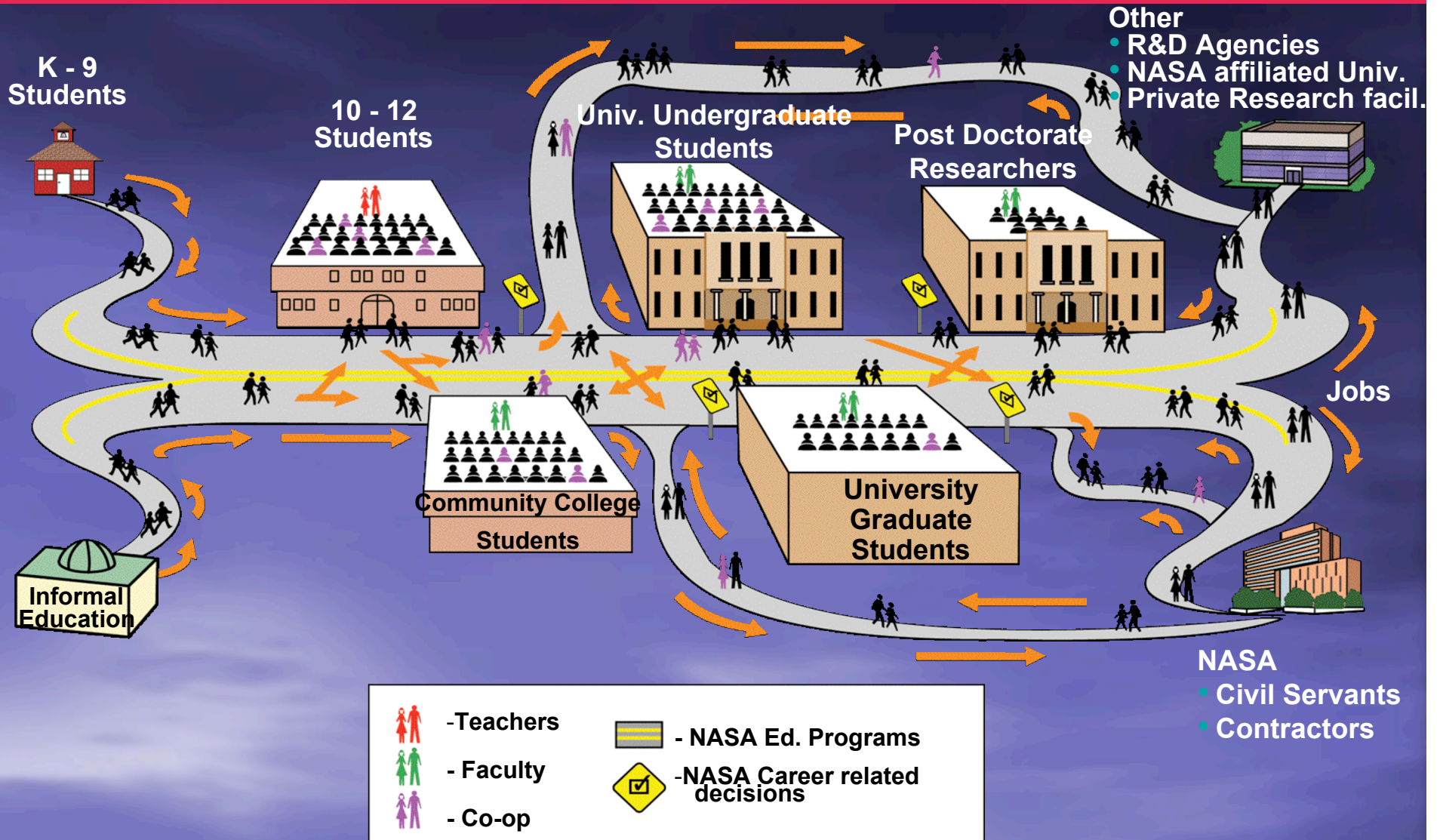
- Ensures adherence to equal opportunity laws. Collaboratively develops & implements an Agency-wide diversity plan and strategic outreach plan that provides a highly-talented, diverse group of individuals in the candidate pool who possess the critical competencies and skills relevant to the Agency's priorities.

### NASA RECRUITMENT COMMITTEE

A corporate-wide infrastructure of talented, experienced personnel representing Centers, Enterprises and Headquarters



# Building a NASA Pipeline







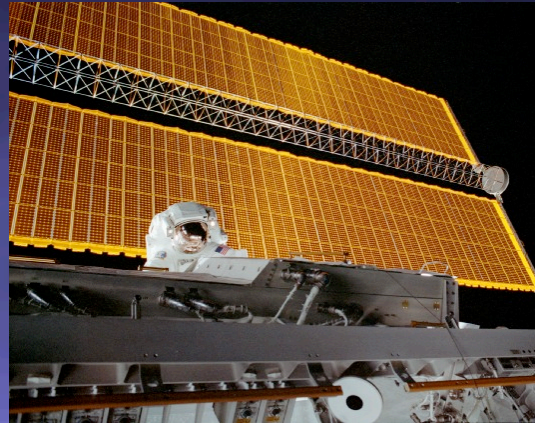
# NASA Education Enterprise





# NASA Education Goals

**1) MOTIVATE STUDENTS TO PURSUE CAREERS IN SCIENCE, MATHEMATICS, ENGINEERING, AND TECHNOLOGY**



**2) PROVIDE EDUCATORS WITH UNIQUE TEACHING TOOLS AND COMPELLING TEACHING EXPERIENCES**



**3) ENSURE THAT WE ARE INVESTING THE TAXPAYER'S RESOURCES WISELY**

**4) ENGAGE MINORITY & UNDERREPRESENTED STUDENTS, EDUCATORS, AND RESEARCHERS IN NASA'S EDUCATION PROGRAM**





# NASA Education Priorities



Expand STEM **pipeline**  
(Pre-college)

Increase STEM **workforce**  
(Post-secondary)





# New Initiatives for FY03

## Four Educational Programs



*Explorer Schools*

*Explorer Institutes*

*Science and Technology Scholarship Program*

*Educator Astronaut Program*





# Bottom Line

- **NASA's Self-Interest**
- **National Need**
- **Taking Proactive Steps**
- **Collaboration with Industry, Academia and Other Government Agencies**